Fig. 1

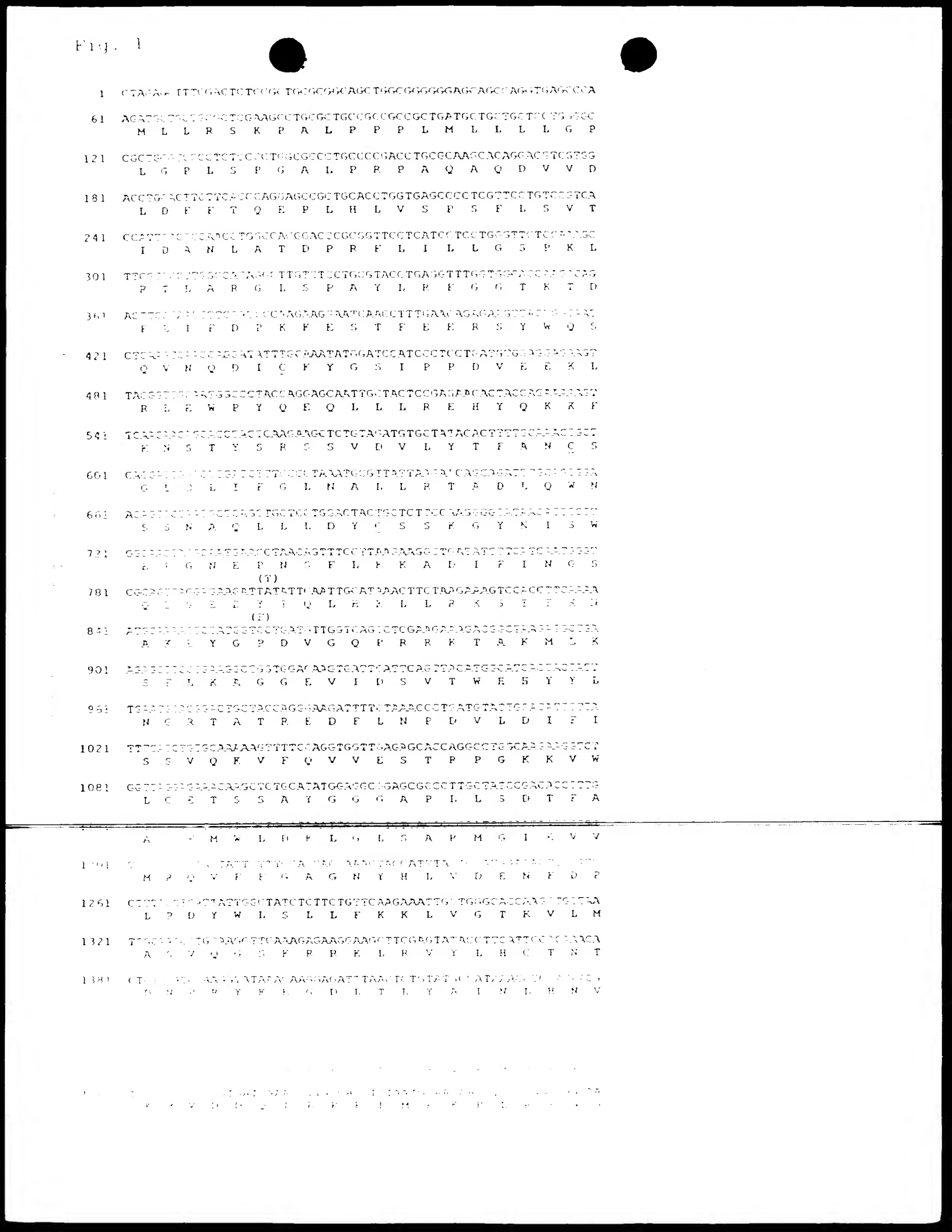
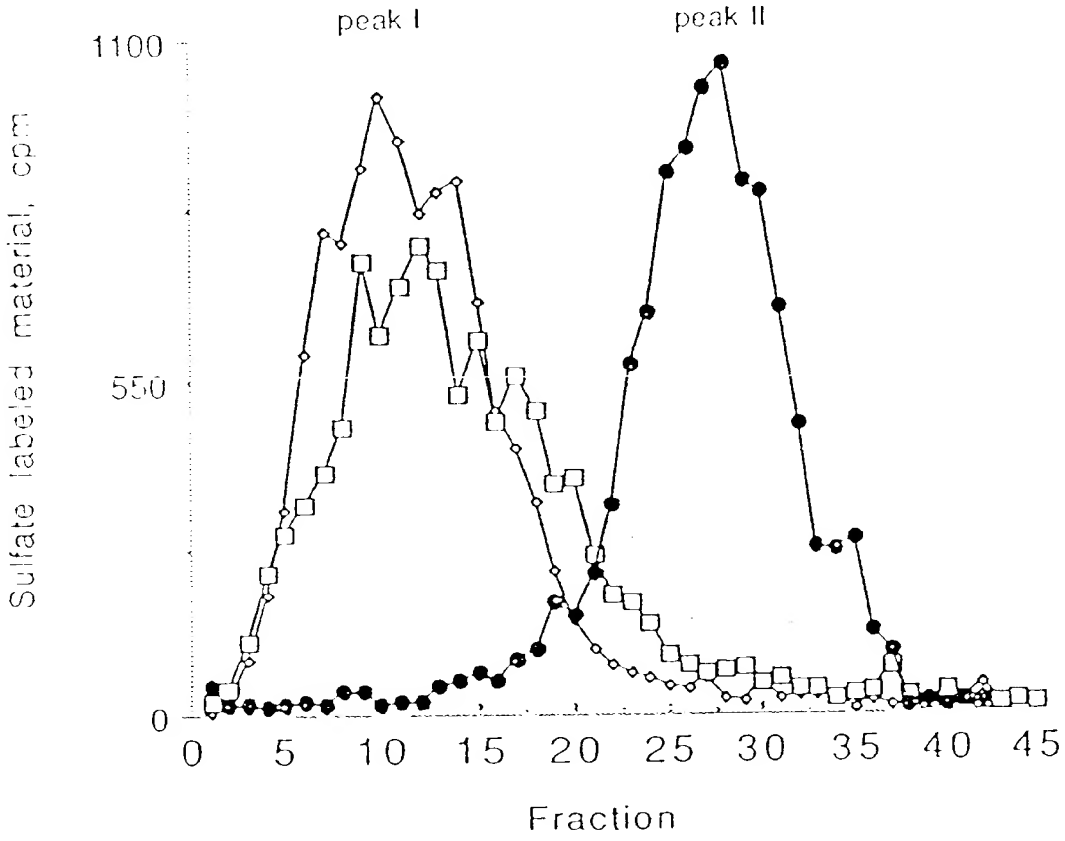


Fig. 2


peak I
peak II
1100
550
0
Sulfate labeled material, cpm
0 5 10 15 20 25 30 35 40 45
Fraction

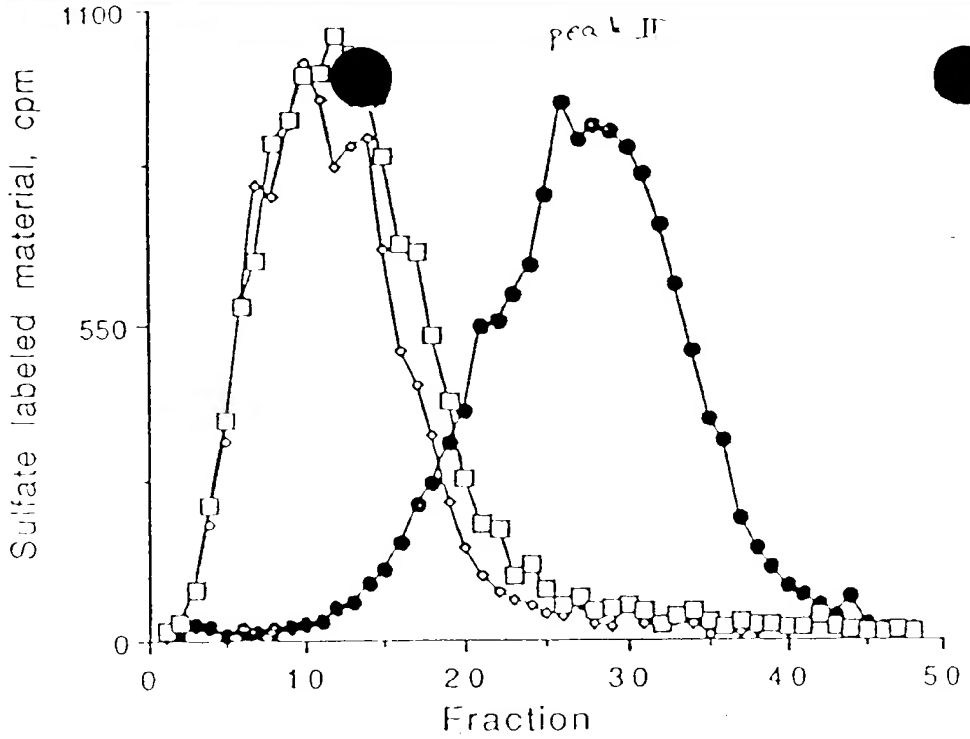

peak II
1100
550
0
Sulfate labeled material, cpm
0
10
20
30
40
50
Fraction

Fig. 3A

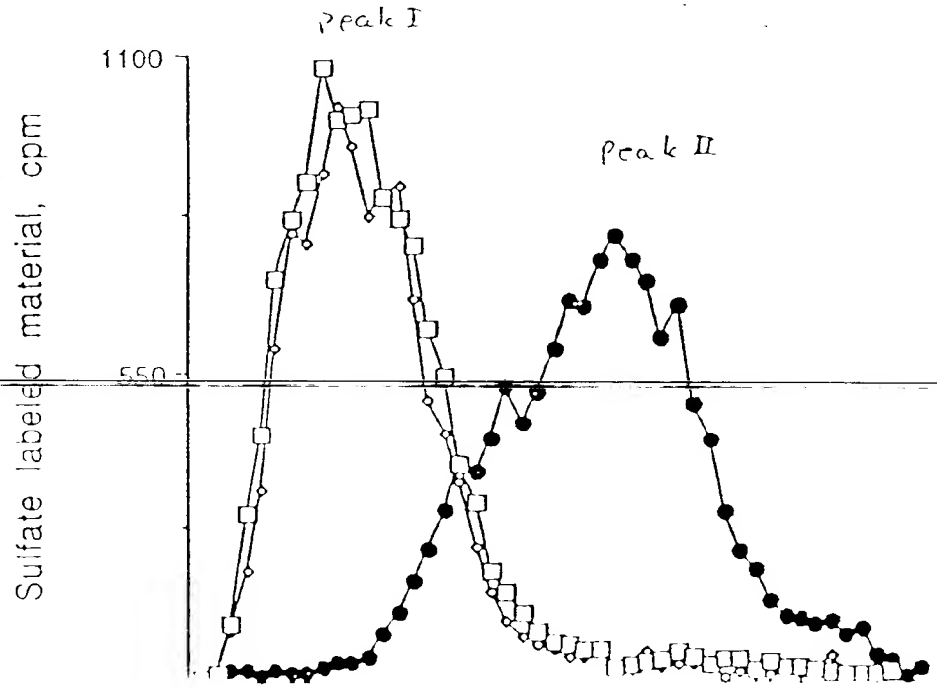
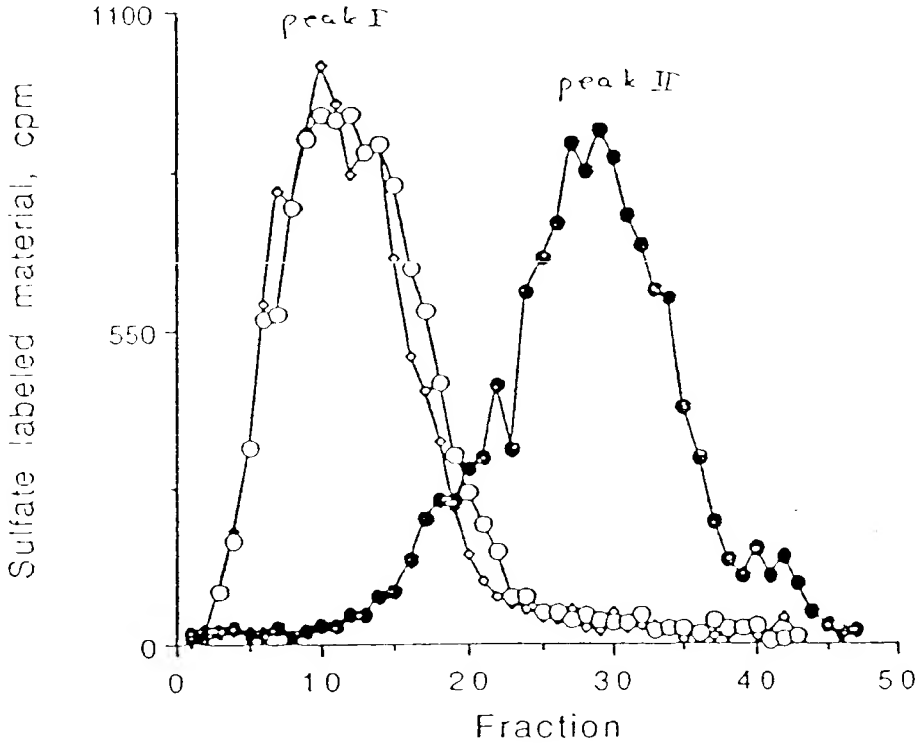

Peak I
1100
Peak II
550
Sulfate labeled material, cpm

Fig. 3B

Fig. 4


1100
550
0
peak I
peak II
Sulfate labeled material, cpm
0
10
20
30
40
50
Fraction

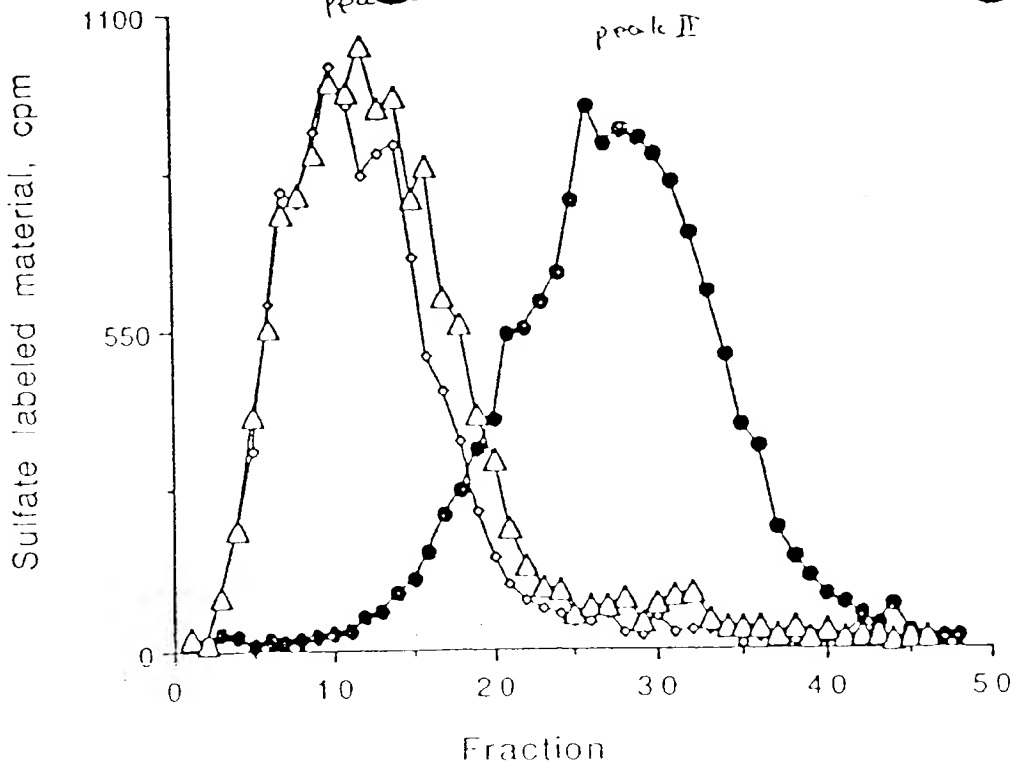
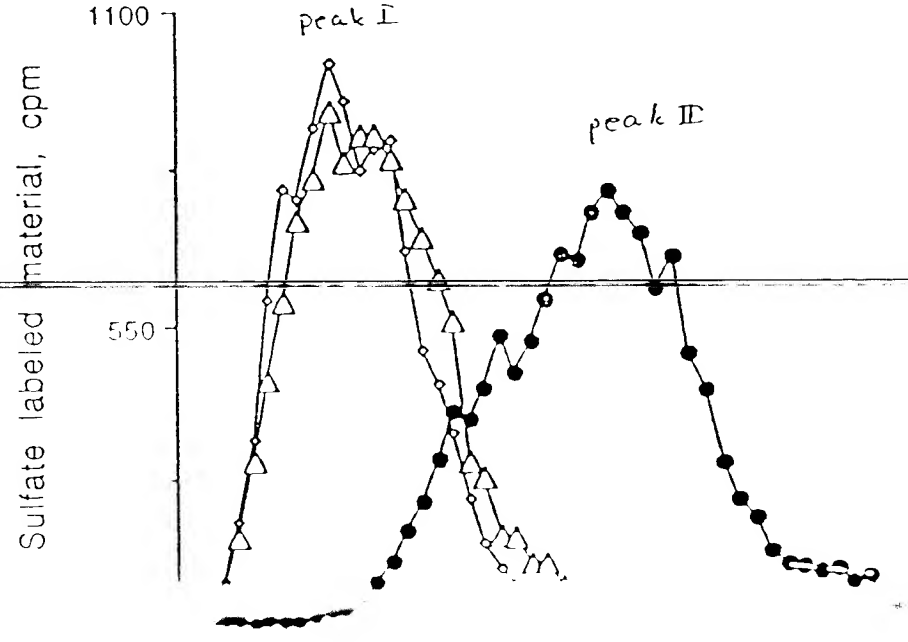

peak I
peak II
1100
550
0
Sulfate labeled material, cpm
0
10
20
30
40
50
Fraction

Fig. 5A


peak I
peak II
1100
550
Sulfate labeled material, cpm
Fraction

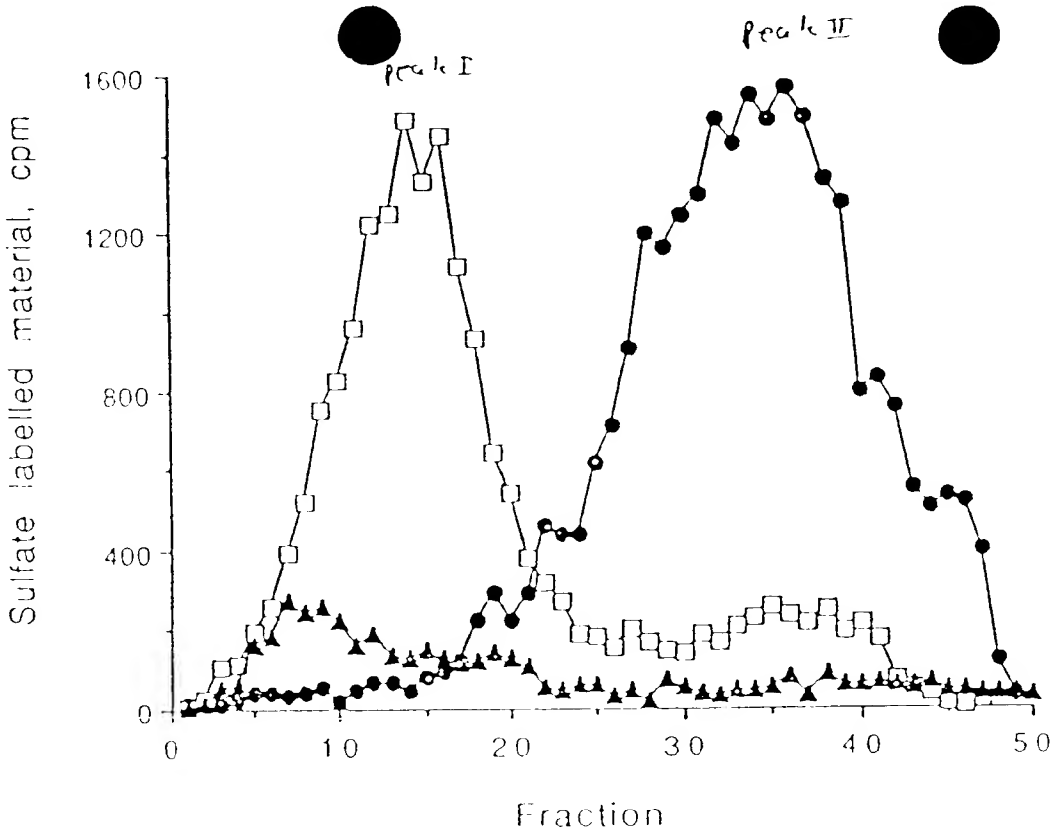
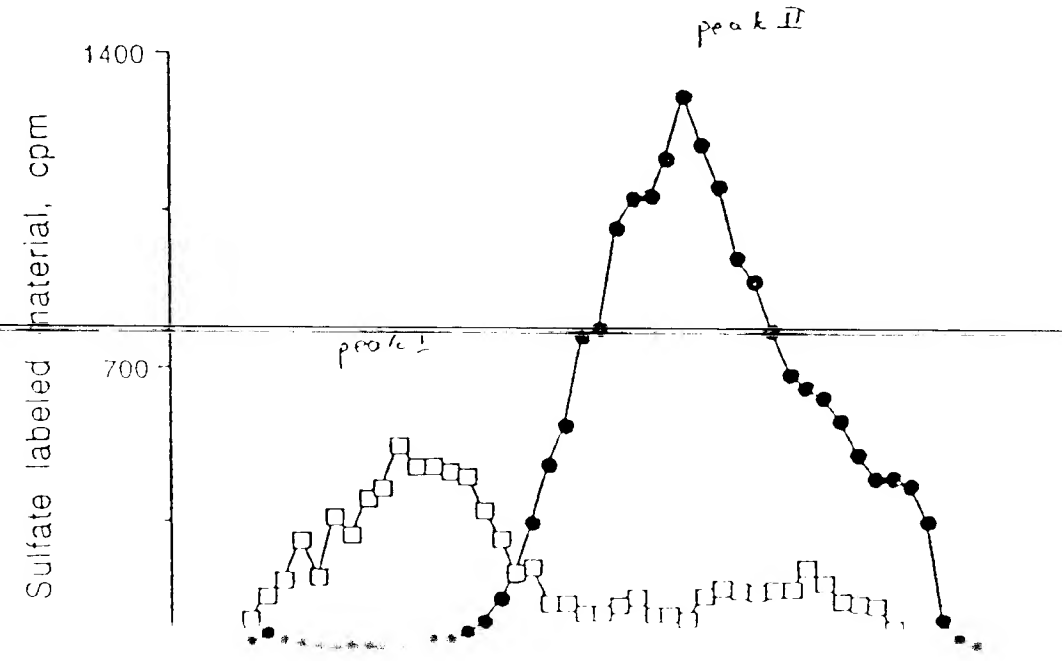


Fig. 6A



Fraction

Fig. 6B

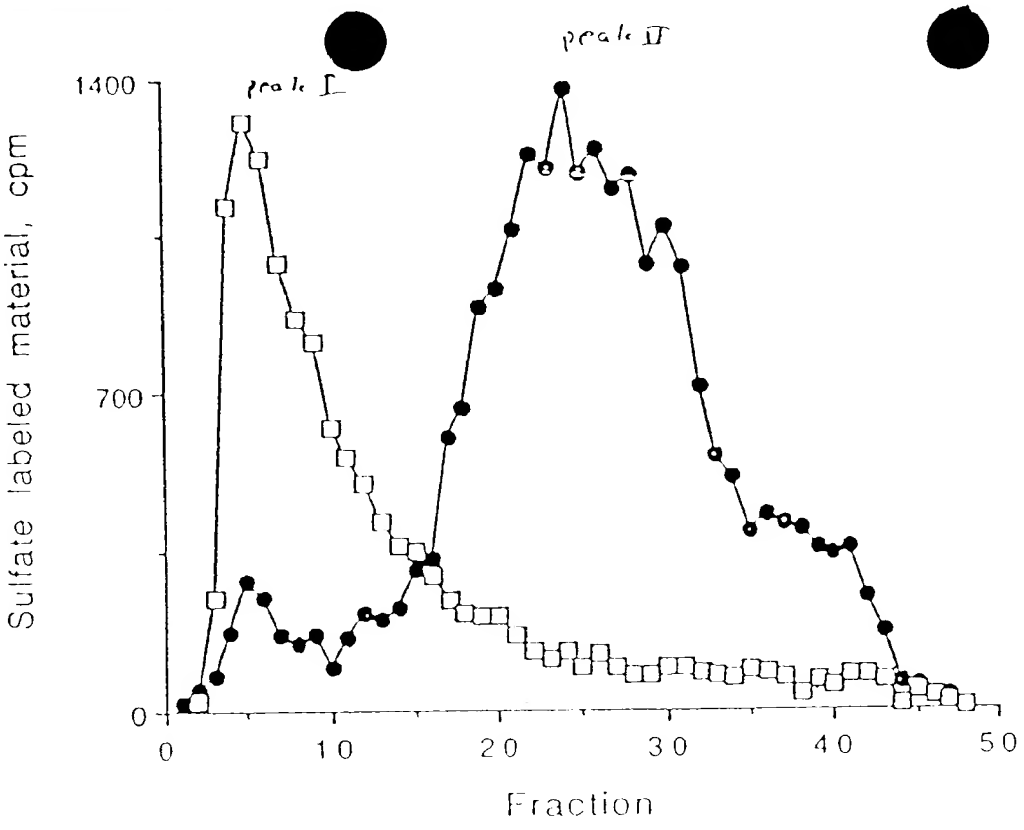
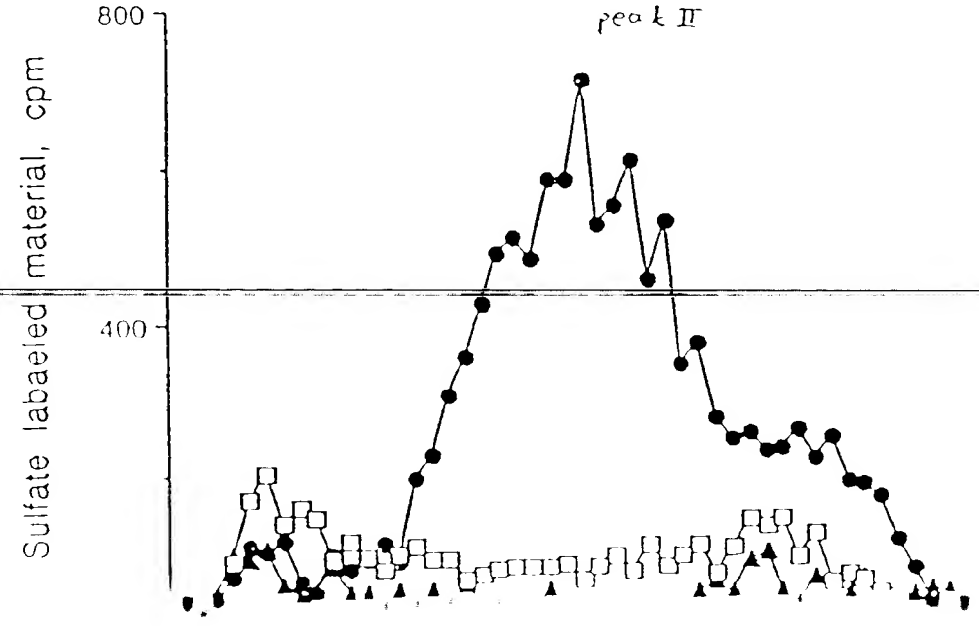

peak II
peak I
1400
700
0
Sulfate labeled material, cpm
0
10
20
30
40
50
Fraction

Fig. 7A


800
400
peak II
Sulfate labaeled material, cpm
Fraction

(Fig. 7B)

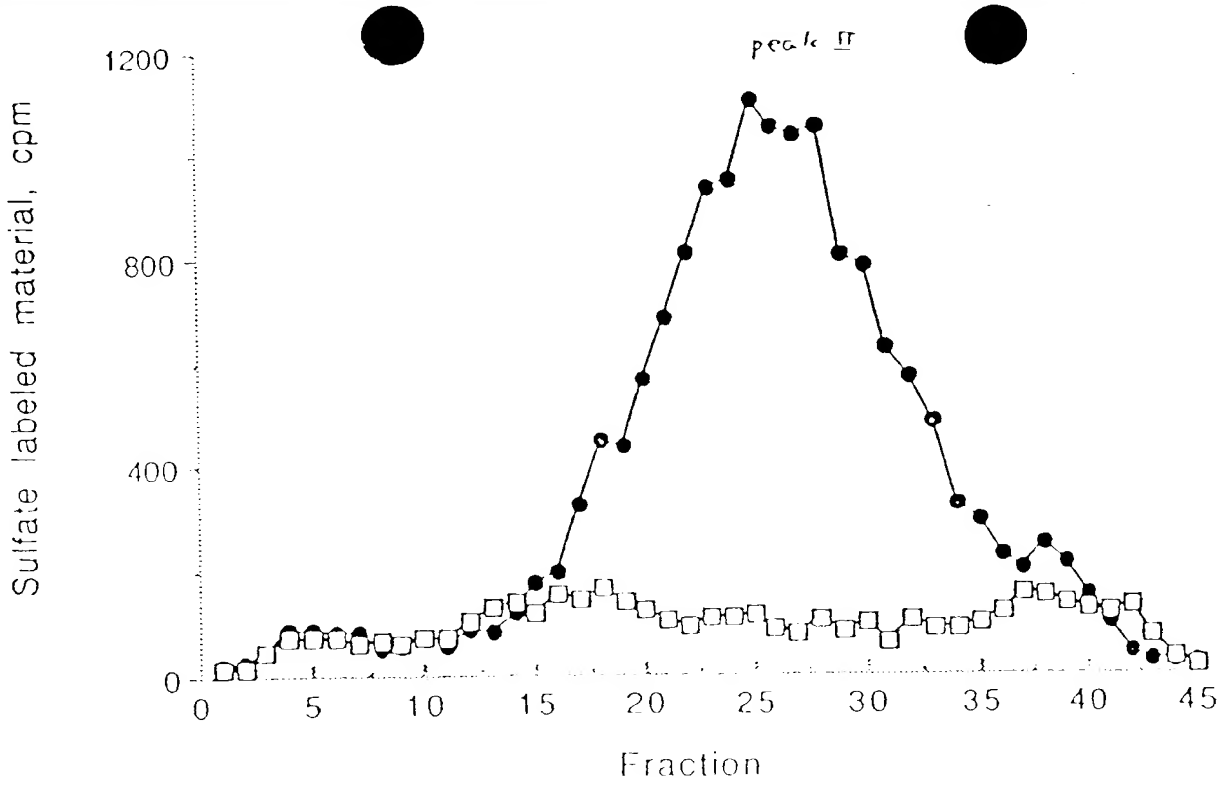
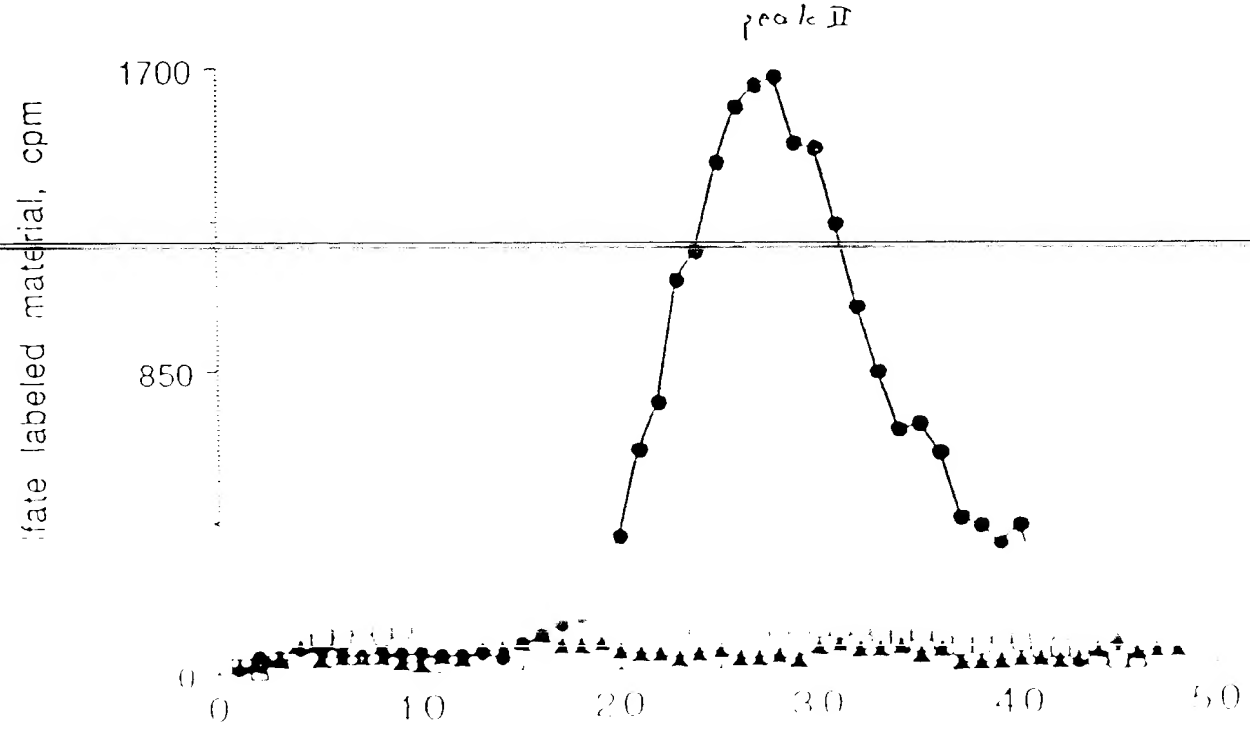

peak II
1200
800
400
0
Sulfate labeled material, cpm
0
5
10
15
20
25
30
35
40
45
Fraction

Fig. 8A


peak II
1700
850
0
0
10
20
30
40
50

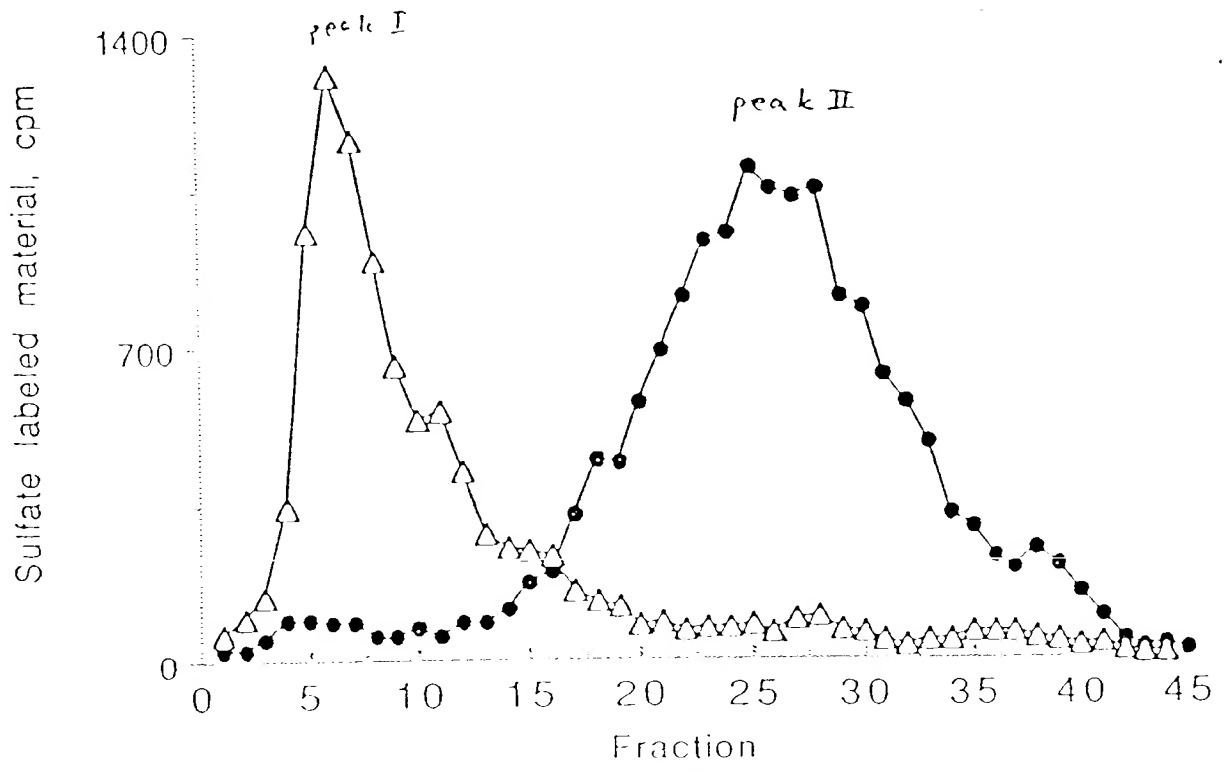
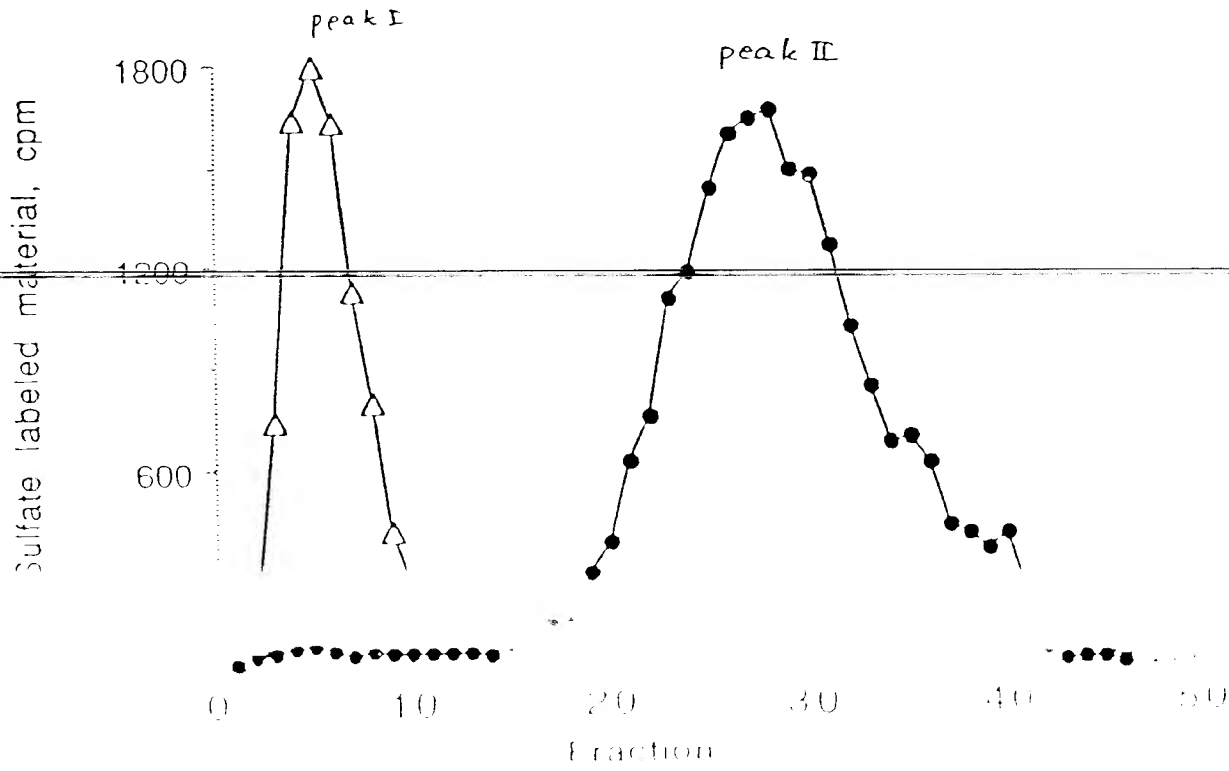
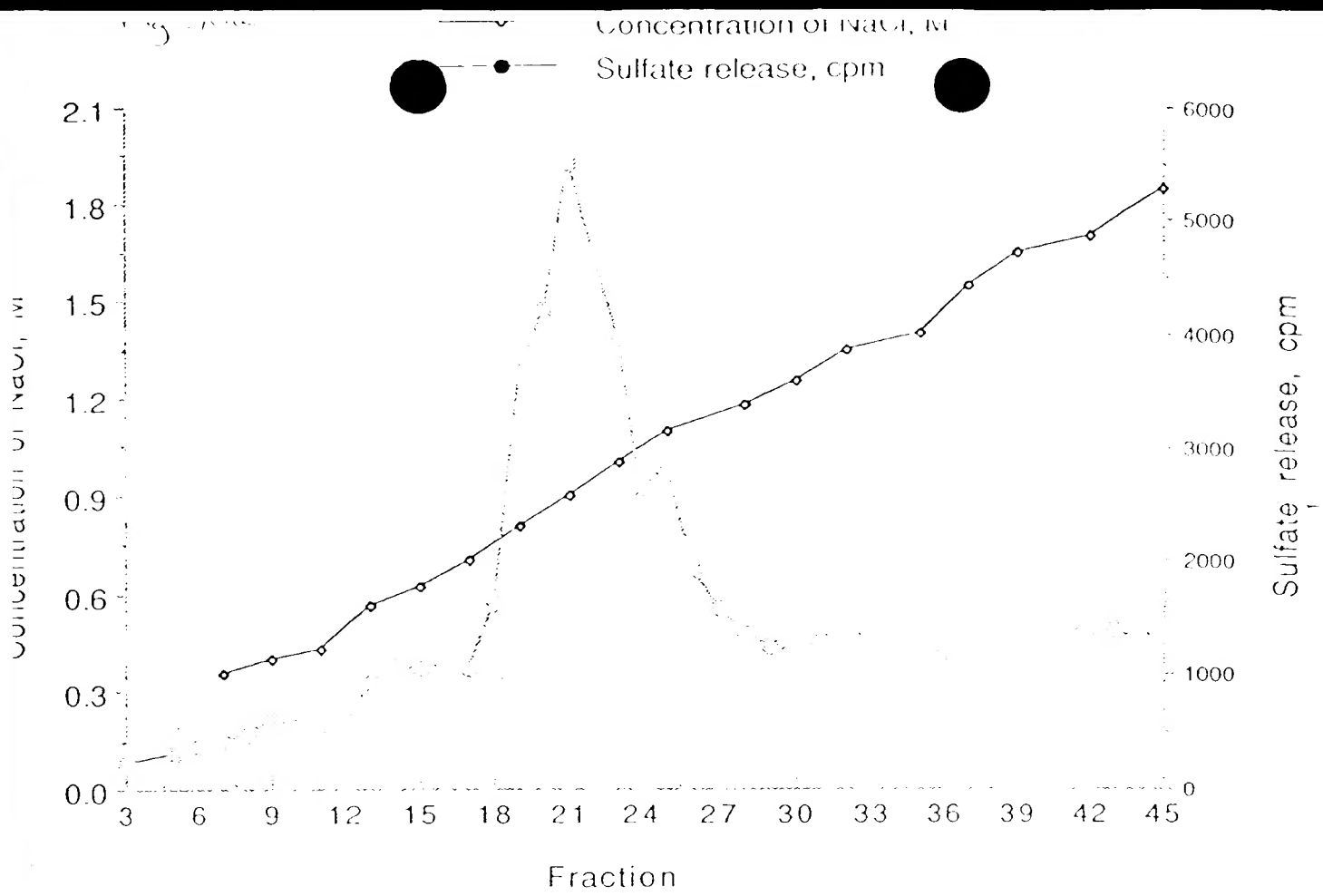

peak I
peak II
1400
700
0
Sulfate labeled material, cpm
0 5 10 15 20 25 30 35 40 45
Fraction

Fig. 9A


peak I
peak II
1800
600
Sulfate labeled material, cpm
0 10 20 30 40 50
Fraction


Concentration of NaCl, M
Sulfate release, cpm
2.1
1.8
1.5
1.2
0.9
0.6
0.3
0.0
6000
5000
4000
3000
2000
1000
0
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45
Fraction

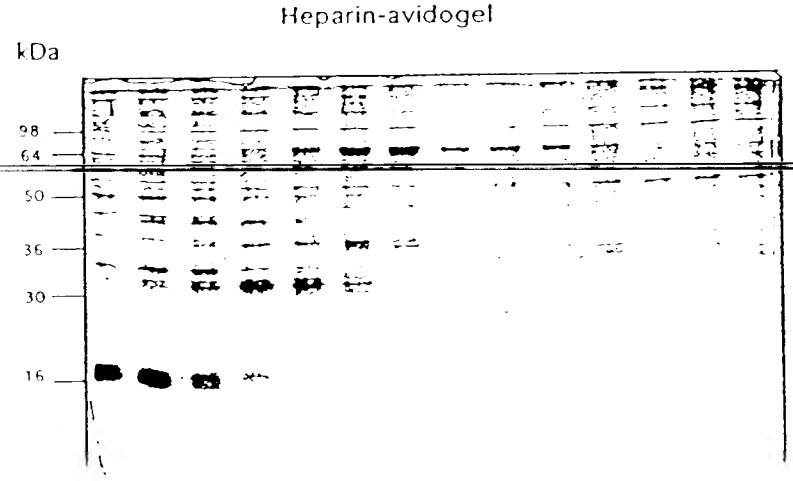

Heparin-avidogel
kDa
98
64
50
36
30
16

Fig. 10b

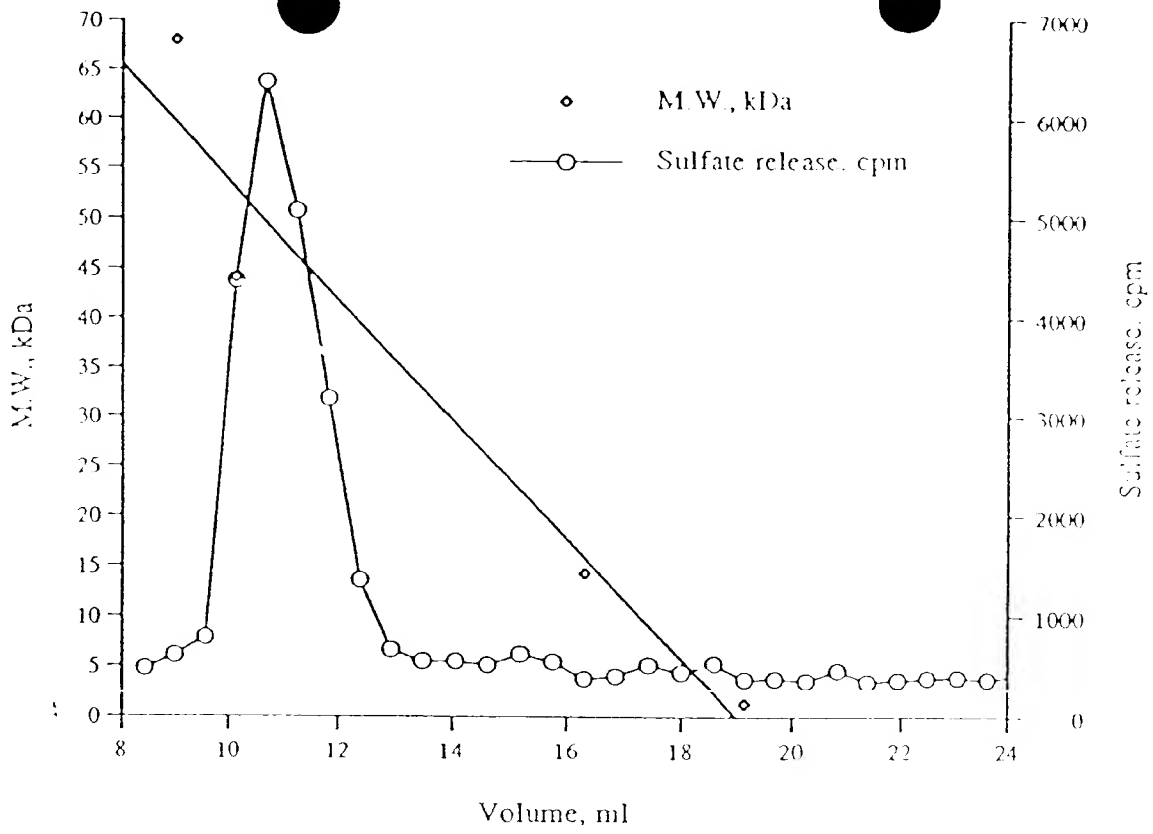


Fig. 11a

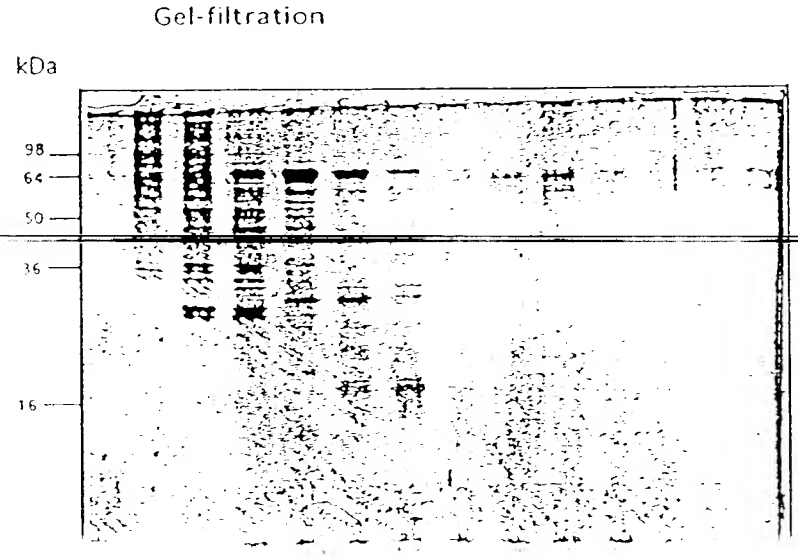
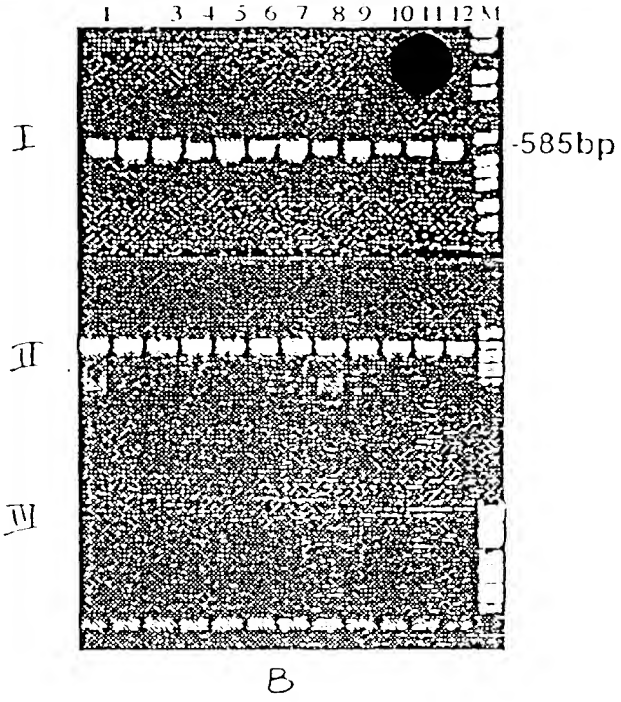


Fig. 11b


1 2 3 4 5 M
I
II
III
-585bp

A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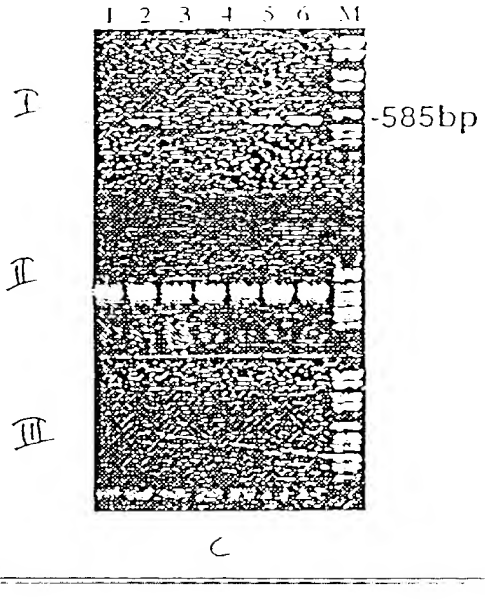
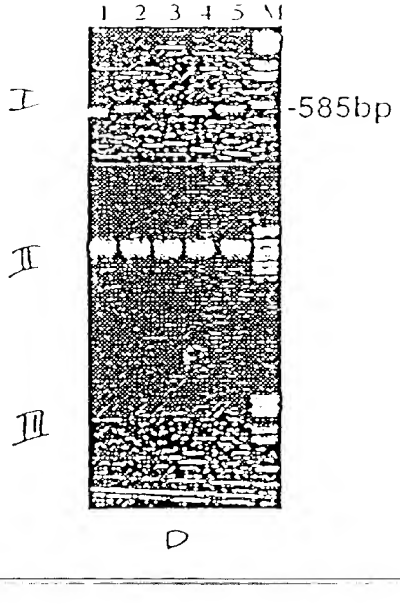
I
II
III
-585bp

B


1 2 3 4 5 6 M
I
II
III
-585bp

C


1 2 3 4 5 M
I
II
III
-585bp

D

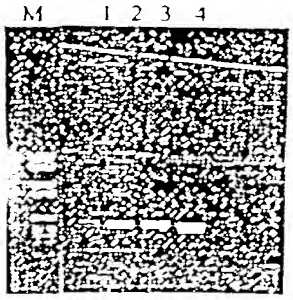
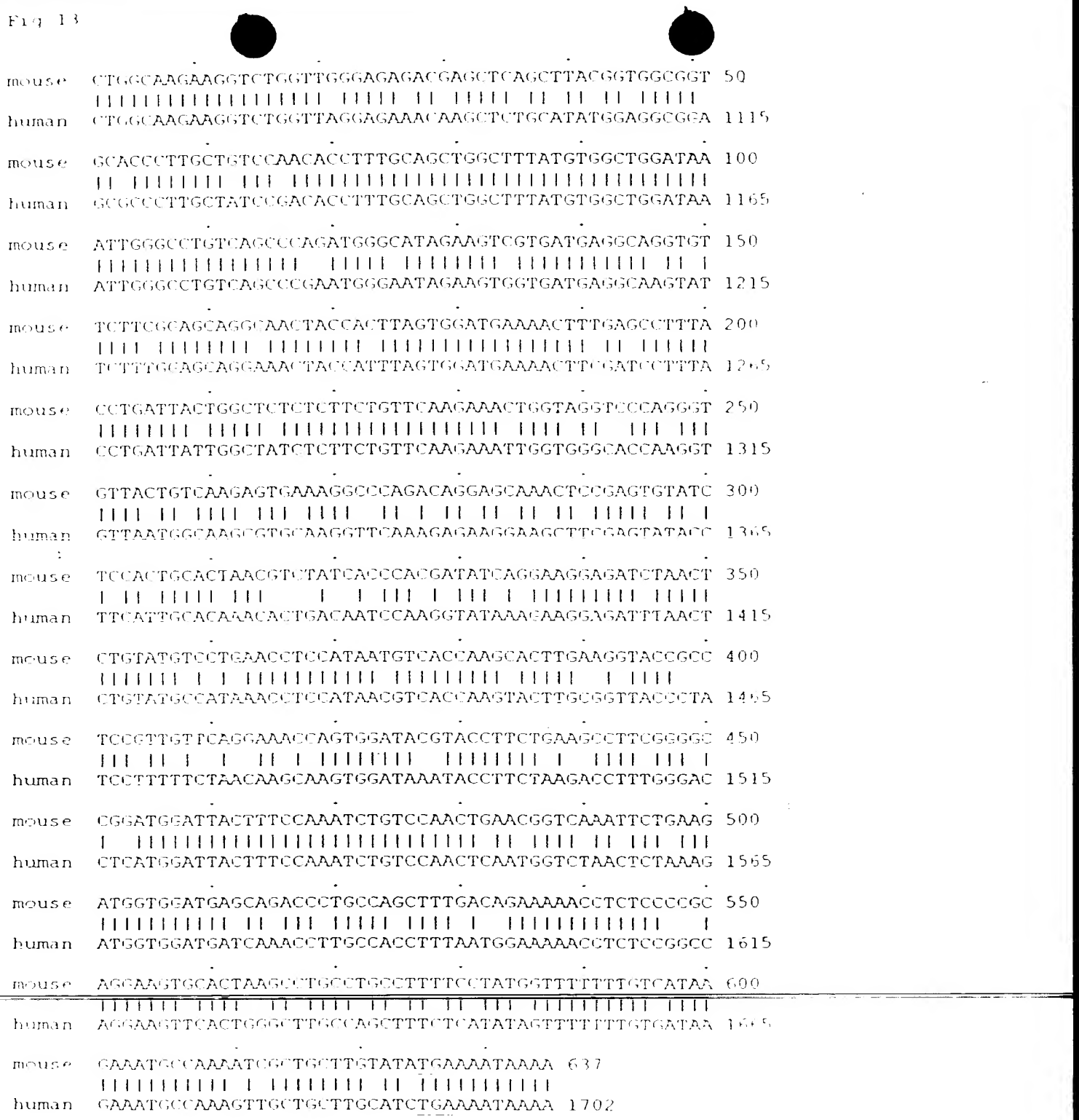

M 1 2 3 4

Fig 13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human CTGGCAAGAAGGTCTGGTTAGGAGAAACAAGCTCTGCATATGGAGGCGGA 1115
mouse GCACCCTTGCTGTCCAACACCTTTGCAGCTGGCTTTATGTGGCTGGATAA 100
human GCGCCCTTGCTATCCGACACCTTTGCAGCTGGCTTTATGTGGCTGGATAA 1165
mouse ATTGGGCCTGTCAGCCCAGATGGGCATAGAAGTCGTGATGAGGCAGGTGT 150
human ATTGGGCCTGTCAGCCCGAATGGGAATAGAAGTGGTGATGAGGCAAGTAT 1215
mouse TCTTCGGCAGCAGGCAACTACCACTTAGTGGATGAAAACTTTGAGCCTTTA 200
human TCTTTGGCAGCAGGAAACTACCATTTAGTGGATGAAAACTTCGATCCTTTA 1265
mouse CCTGATTACTGGCTCTCTCTTCTGTTCAAGAAACTGGTAGGTCCCAGGGT 250
human CCTGATTATTGGCTATCTCTTCTGTTCAAGAAATTGGTGGGCACCAAGGT 1315
mouse GTTACTGTCAAGAGTGAAAGGCCCAGACAGGAGCAAACTCCGAGTGTATC 300
human GTTAATGGCAAGCGTGCAAGGTTCAAAGAGAAGGAAGCTTCGAGTATACC 1365
mouse TCCACTGCACTAACGTCTATCACCCACGATATCAGGAAGGAGATCTAACT 350
human TTCATTGCACAAACACTGACAATCCAAGGTATAAAGAAGGAGATTTAACT 1415
mouse CTGTATGTCCTGAACCTCCATAATGTCACCAAGCACTTGAAGGTACCGCC 400
human CTGTATGCCATAAACCTCCATAACGTCACCAAGTACTTGCGGTTACCCTA 1465
mouse TCCGTTGTTCAGGAAACCAGTGGATACGTACCTTCTGAAGCCTTCGGGGC 450
human TCCTTTTTCTAACAAGCAAGTGGATAAATACCTTCTAAGACCTTTGGGAC 1515
mouse CGGATGGATTACTTTCCAAATCTGTCCAACTGAACGGTCAAATTCTGAAG 500
human CTCATGGATTACTTTCCAAATCTGTCCAACTCAATGGTCTAACTCTAAAG 1565
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human ATGGTGGATGATCAAACCTTGCCACCTTTAATGGAAAAACCTCTCCGGCC 1615
mouse AGGAAGTGCACTAAGCCTGCCTGCCTTTTCCTATGGTTTTTTTGTCATAA 600
human AGGAAGTTCACTGGGCTTGCCAGCTTTCTCATATAGTTTTTTTGTGATAA 1665
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human GAAATGCCAAAGTTGCTGCTTGCATCTGAAAATAAAA 1702

Fig. 14

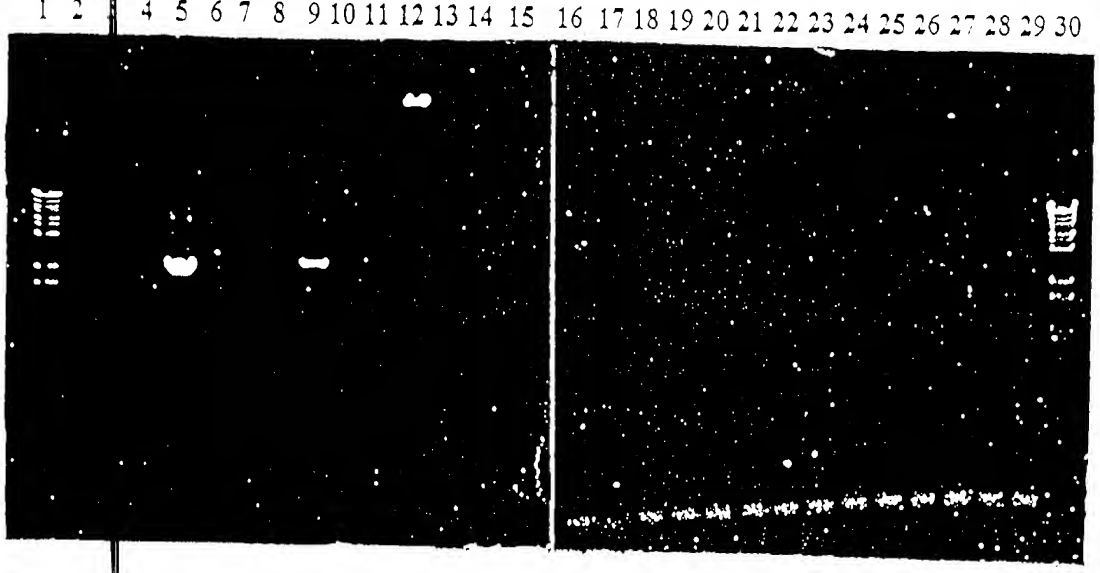
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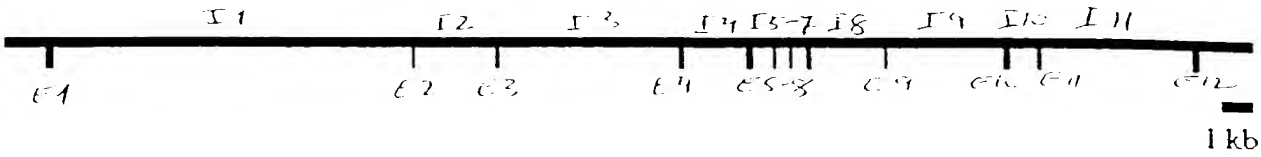
Figure 15



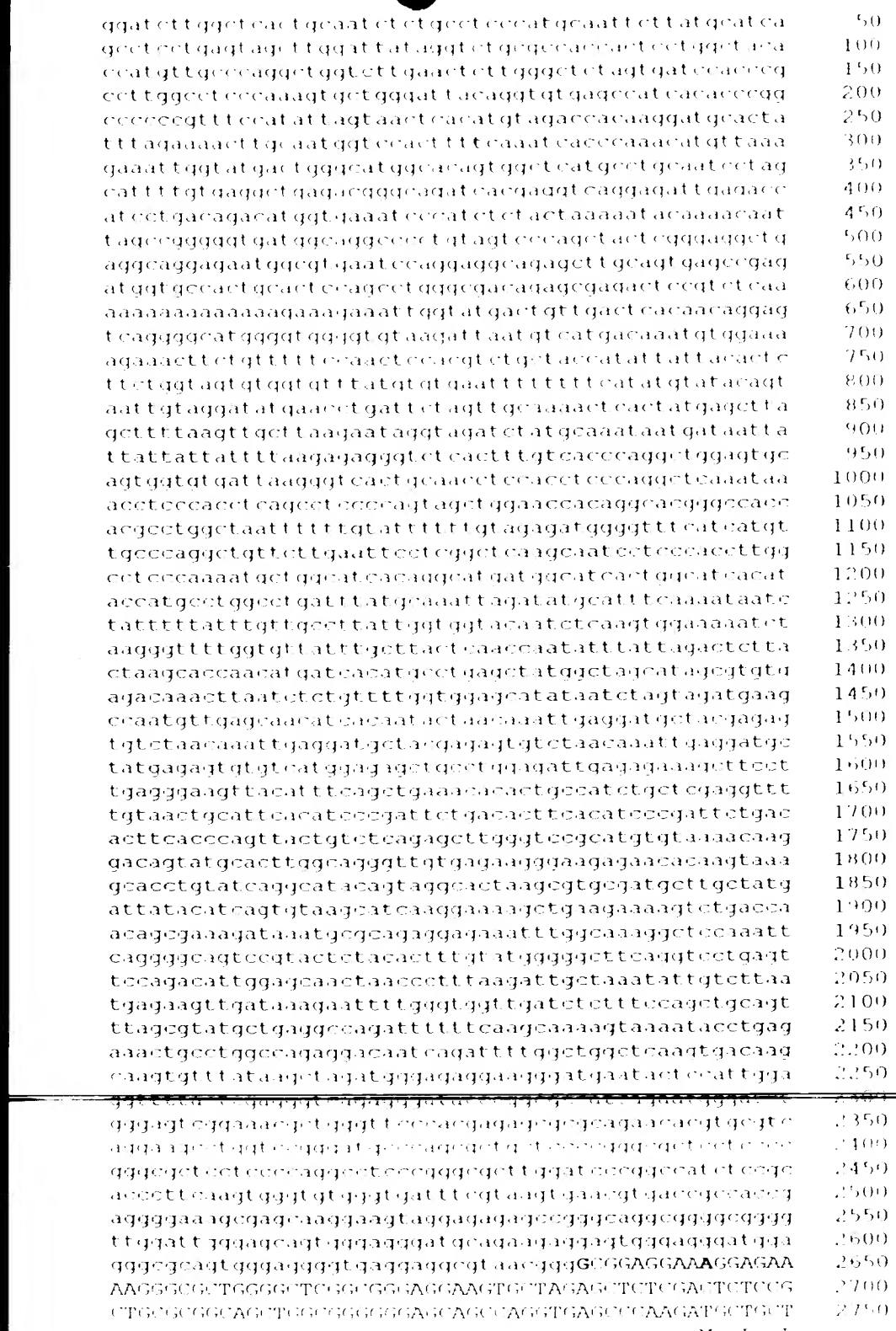
Lambda 8

Lambda 6

Plasmid

Lambda 3

Figure 16



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D V V D L D F [illegible] T Q E P L H L V S

CCCCTCGTTCCTGTCCGTCACCATTGACGCCAACCTGGCCACGGACCCGC 2950

P S F L S V T I D A N L A T D P

GGTTCCTCATCCTCCTGGGgtaagcgccagcctcctggtcctgtcccctt 3000

R F L I L L G

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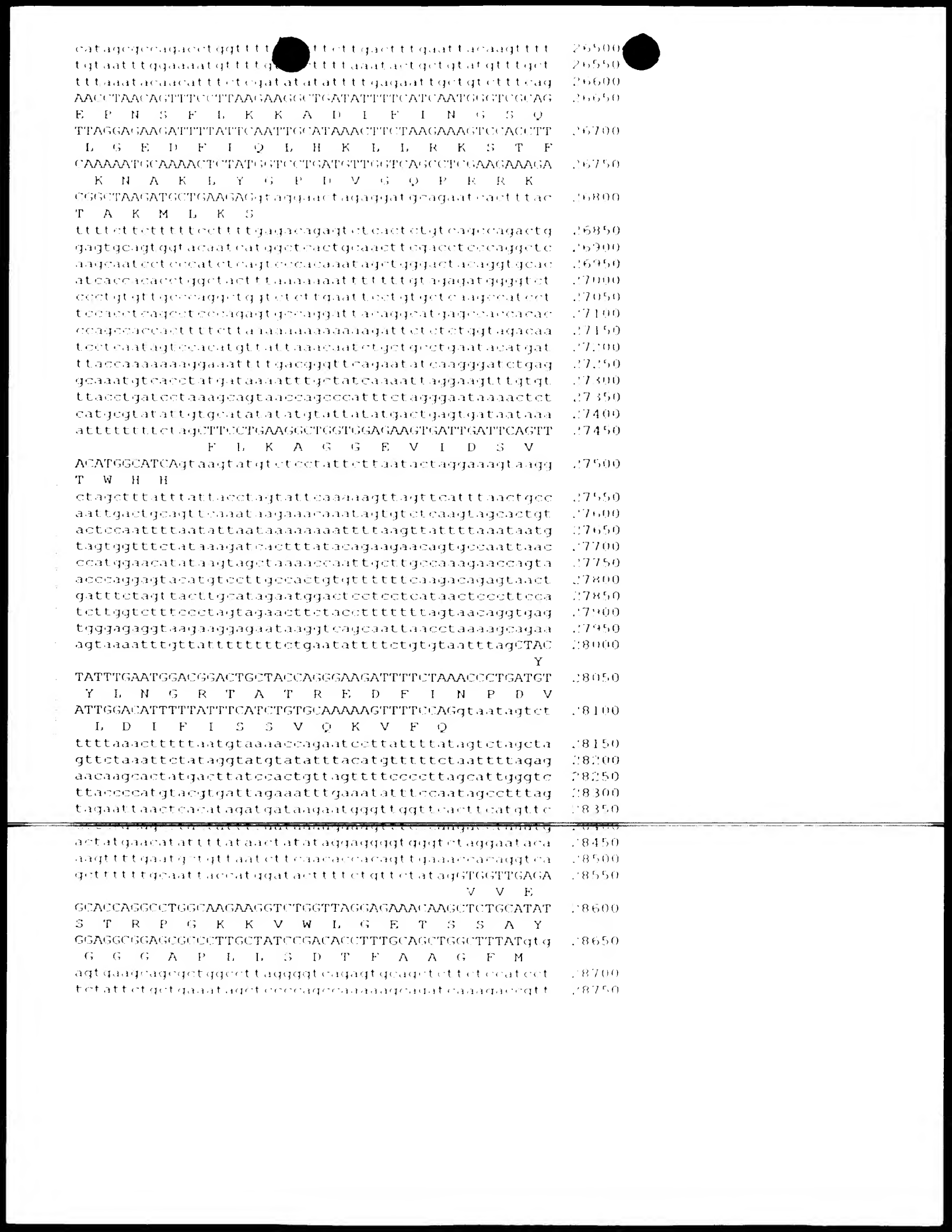

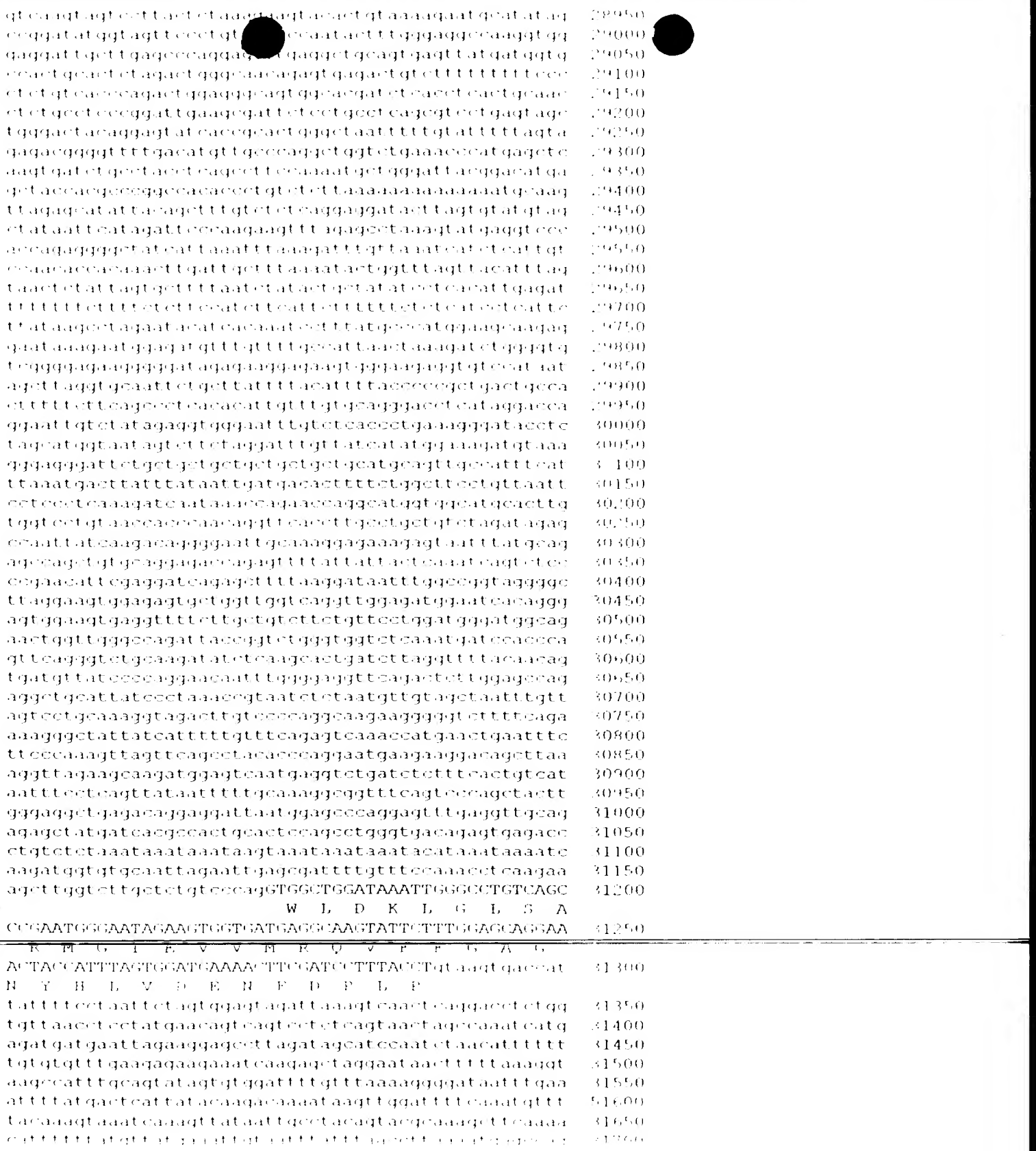

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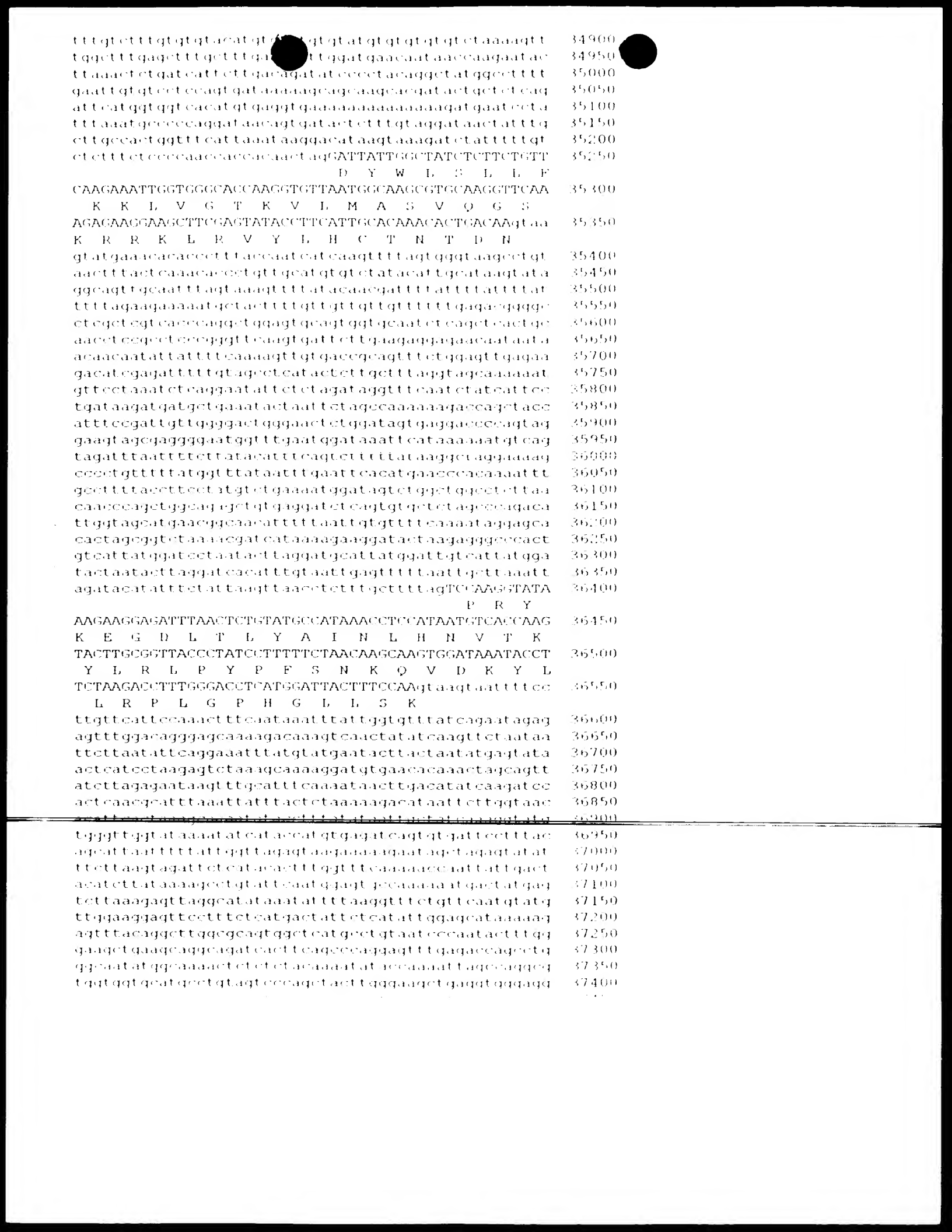

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Figure 17

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                                                                      50
human   MLLRSKPALP PPLMLLLLGP LGPLSPGALP RPAQAQDVVD LDFFTQEPLH
mouse   ----------ML RLLLLWLWGP LGALAQGAPA GTAPTDDVVD LEFYTKEPLR
rat     ---------- -LLLLWLWGR LRALTQGTPA GTAPTKDVVD LEFYTKELFQ

                                                                     100
human   LVSPSFLSVT IDANLATDPR FLILLGSPKL RTLARGLSPA YLRFGGTKTD
mouse   SVSPSFLSIT IDASLATDPR FLTFLGSPRL RALARGLSPA YLRFGGTKTD
rat     SVSPSFLSIT IDASLATDPR FLTFLSSPRL RALSRGLSPA YLRFGGTKTD

                                                                     150
human   FLIFDPKKES TFEERSYWQS QVNQDICKYG SIPPDVEEKL RLEWPYQEQL
mouse   FLIFDPPKEP TSEERSYWKS QVNHDICRSE PVSAAVLRKL QVEWPFQELL
rat     FLIFDPNNEP TSEERSYWQS QDNHDICGSD RVSADVL---- ----------

                                                                     200
human   LLREHYQKKF KNSTYSRSSV DVLYTFANCS GLDLIFGLNA LLRTADLQWN
mouse   LLREQYQKEF KNSTYSRSSV DMLYSFAKCS GLDLIFGLNA LLRTPDLRWN
rat     ---------- ---------- ---------- ---------- ----------

                                                                     250
human   SSNAQLLLDY CSSKGYNISW ELGNEPNSFL KKADIFINGS QLGEDYIQLH
mouse   SSNAQLLLDY CSSKGYNISW ELGNEPNSFW KKAHILIDGL QLGEDFVELH
rat     ---------- ---------- ---------- ---------- ----------

                                                                     300
human   KLLRKSTFKN AKLYGPDVGQ PRRKTAKMLK SFLKAGGEVI DSVTWHHYYL
mouse   KLLQRSAFQN AKLYGPDIGQ PRGKTVKLLR SFLKAGGEVI DSLTWHHYYL
rat     ---------- ---------- ---------- ---------- ----------

                                                                     350
human   NGRTATREDF LNPDVLDIFI SSVQKVFQVV ESTRPGKKVW LGETSSAYGG
mouse   NGRIATKEDF LSSDALDTFI LSVQKILKVT KEITPGKKVW LGETSSAYGG
rat     ---------- ---------- ---------- ---------- ----------

                                                                     400
human   GAPLLSDTFA AGFMWLDKLG LSARMGIEVV MRQVFFGAGN YHLVDENFDP
mouse   GAPLLSNTFA AGFMWLDKLG LSAQMGIEVV MRQVFFGAGN YHLVDENFEP
rat     ---------- ---------- ---------- ---------- ----------

                                                                     450
human   LPDYWLSLLF KKLVGTKVLM ASVQGSKRRK LRVYLHCTNT DNPRYKEGDL
mouse   LPDYWLSLLF KKLVGPRVLL SRVKGPDRSK LRVYLHCTNV YHPRYQEGDL
rat     ---------- ---------- ---------- ---------- ----------

                                                                     500
human   TLYAINLHNV TKYLRLPYPF SNKQVDKYLL RPLGPHGLLS KSVQLNGLTL
mouse   TLYVLNLHNV TKHLKVPFPL FRKFVDTYLL KPSGPDGLLS KSVQLNGQIL
rat     ---------- ---------- ---------- ---------- ----------L

                                                                     543
human   KMVDDQTLPP LMEKPLRPGS SLGLPAFSYS FFVIRNAKVA ACI~
mouse   KMVDEQTLPA LTEKPLPAGS ALSLPAFSYG FFVIRNAKIA ACI~
rat     KMVDEQTXPA LTEKPLPAGS SLSVPAFSYG FFVIRNAKIA ACI~
```

Figure 18

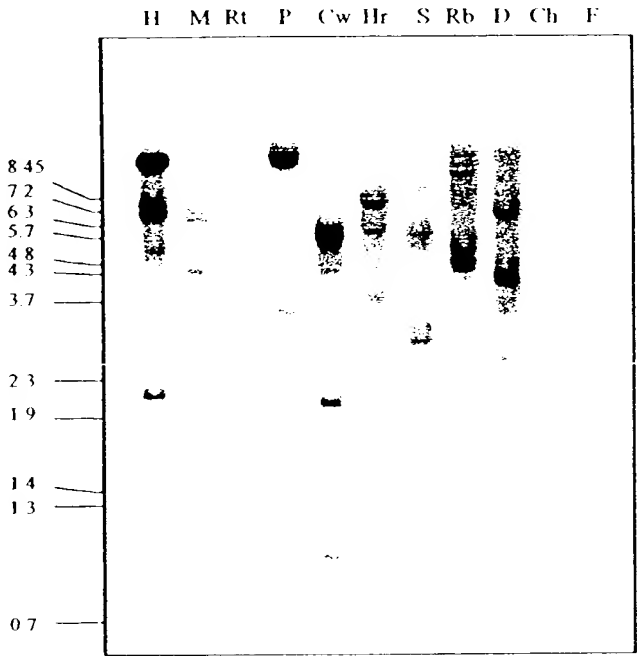

Figure 19

```
     |MLLRGKPALPPPLMLLLLGPLGPLSPGALPRPAQAQDVVDLDFFTQEPLHLVSPSFLSVT|  60
PHD  |                EEEEE                HHH          EEEE     EEE|

     |IDANLATDPRFLILLGSPKLRTLARGLSPAYLRFGGTKTDFLIFDPKKESTFEERSYWQS|  120
PHD  |EEE          EEEEE     HHHHHHH     HHHHE      EEEEE          HHHHHHH|

     |QVNQDICKYGSIPPDVEEKLRLEWPYQEQLLLREHYQKKFKNSTYSRSSVDVLYTFANCS|  180
PHD  |HHHHHHHHH        HHHHHHHH    HHHHHHHHHHHHHHHHHH      EEEEEEEEEEEE  |

     |GLDLIFGLNALLRTADLQWNSSNAQLLLDYCSSKGYNISWELGNEPNSFLKKADIFINGS|  240
PHD  |  HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH     EEEEE      HHHHHHHH EEEE  |

     |QLGEDYIQLHKLLRKSTFKNAKLYGPDVGQPRRKTAKMLKSFLKAGGEVIDSVTWHHYYL|  300
PHD  |    HHHHHHHHHHHHHHHHHH                HHHHHHHHHHHHHH    EEEEEEEEEEE  |

     |NGRTATREDFLNPDVLDIFISSVQKVFQVVESTRPGKKVWLGETSSAYGGGAPLLSDTFA|  360
PHD  |                HHHHHHHHHHHHHEEEEEEE      EEEEEE           HHHHHHHH|

     |AGFMWLDKLGLSARMGIEVVMRQVFFGAGNYHLVDENFDPLPDYWLSLLFKKLVGTKVLM|  420
PHD  |HHHHHHHHH    HHHHI HHHHHHHHHHHH    EEEEE       HHHHHHHHHHHHH EEEEE|

     |ASVQGSKRRKLRVYLHCTNTDNPRYKEGDLTLYAINLHNVTKYLRLPYPFSNKQVDKYLL|  480
PHD  |EEE     E  EEEEEEEE              EEEEEE      EEEEE       HHHHHHHHH|

     |RPLGPHGLLSKSVQLNGLTLKMVDDQTLPPLMEKPLPPGSSLGLPAFSYSFFVIRNAKVA|  540
PHD  |HH       EEEEEEE    EEEEE                                EEEEEEEE EE  |

      |ACI|                                                              543
PHD   |   |
```